NWS FORM E-5 (11-88) **(PRES. by NWS Instruction 10-924)** **U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE**	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH **July** YEAR **2012**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **Alan E. Gerard, Meteorologist In-Charge** DATE **08/21/2012**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

[X] **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

Synopsis...

The month of July brought much needed precipitation to a large portion of the Hydrologic Service Area (HSA). Temperatures ranged from 0.8 to 1.7 degrees above normal. A moderate drought remained across Northeast Louisiana while severe drought remained across Southeast Arkansas.

High pressure centered across the Gulf of Mexico dominated the weather from the 1st through the 10th. Isolated to scattered showers and thunderstorms developed across parts of the HSA during this period. Some damaging winds were reported across the region with the thunderstorm activity on the 1st, 4th, 5th, and 7th. Where rainfall did occur, it was mostly light; however, there were some isolated areas of 2.00 to 3.00 inches.

A weak front moved into Southeast Arkansas on the 11th. The presence of this frontal system, and an upper level weakness between high pressure to the east and to the west of the HSA allowed for a wet period. Moderate to heavy rainfall was fairly widespread from the 11th to the 13th across portions of East and South Mississippi. The heaviest rainfall occurred on the 11th over East Mississippi, where 1.00 to 4.00 inches fell. On the 12th, 1.00 to 2.00 inches fell southeast of the Natchez Trace Parkway. On the 13th, 1.00 to 1.50 inches fell mostly over Southwest Mississippi. On the 14th and 15th, 0.25 to 1.50 inches of rainfall was scattered across the HSA.

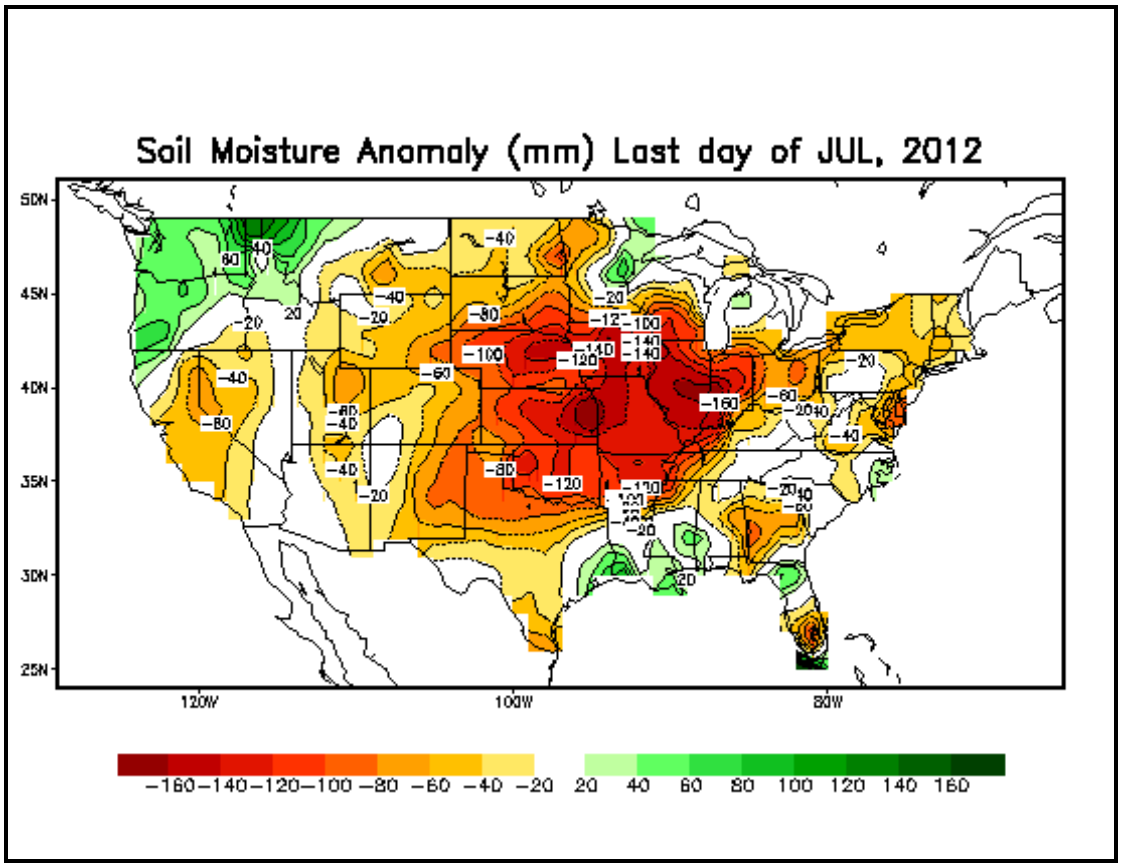
On the 16th and 17th, surface and upper level high pressure from the east built into the region. Isolated to scattered showers were common each day. A tropical upper level trough began pushing westward through the region from the 18th to 21st. Moderate to heavy rainfall from 2.00 to 5.00 inches fell across East and South Mississippi on the 18th and 19th. Isolated to scattered heavy rainfall continued across this area from the 20th into 21st.

More typical southerly return flow around the high pressure to the east of the HSA prevailed from the 22nd to the 24th. Hot and humid conditions prevailed with only isolated to scattered showers occurring from the 25th and 26th. A weak upper level trough pushed through the area on 27th and 28th bringing some isolated to scattered showers and thunderstorms to the HSA.

Rainfall was heavy across Northeast and Southwest Mississippi during this time period, where 1.00 to 4.00 inches of rainfall occurred. A frontal system moved into northern and central portions of the HSA on the 29th and 30th bringing scattered showers. High humidity and temperatures produced high heat indices during this period. The month ended with most showers in Northeast Mississippi as the frontal system drifted back to the northeast from Central Mississippi.

River and Soil Conditions...

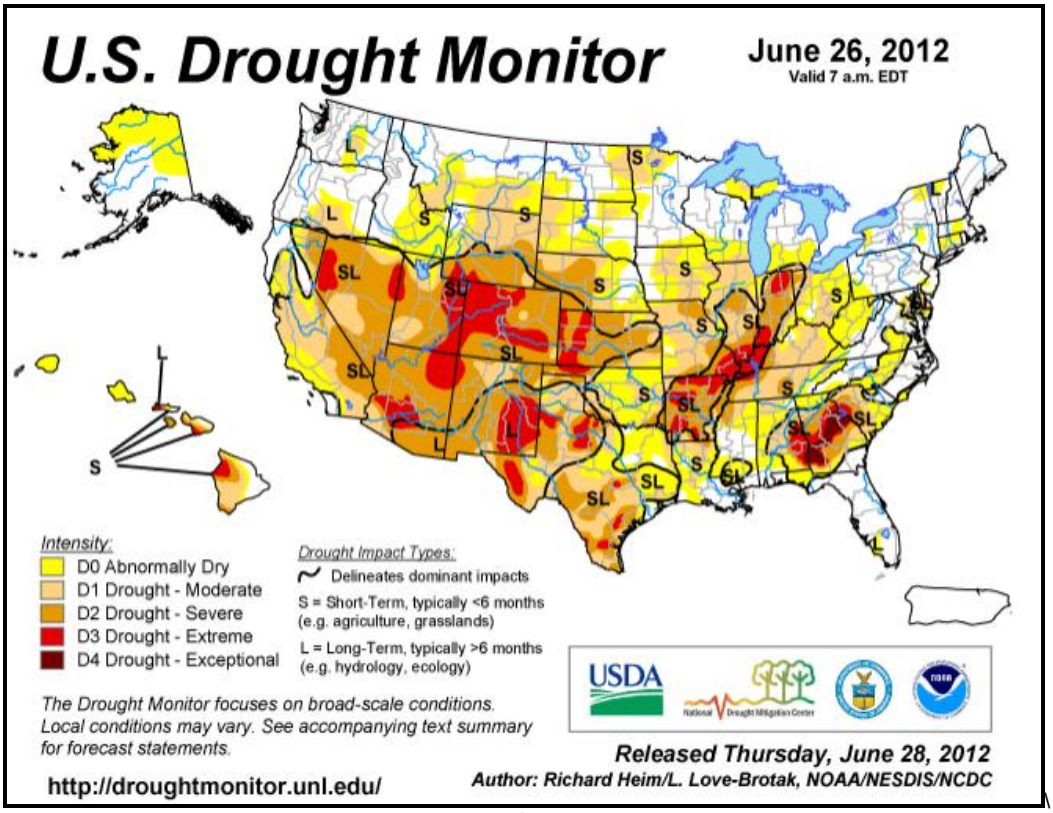
Soil Moisture:



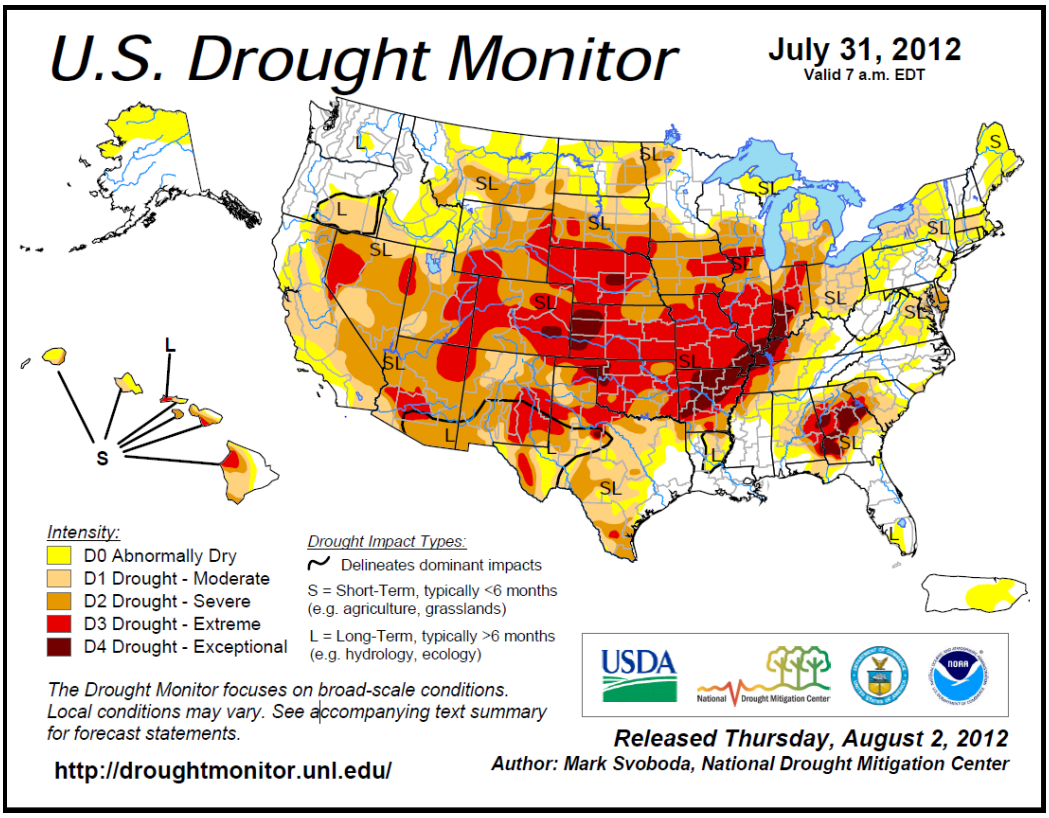
July 2012

Drought Comparison to prior month:

.



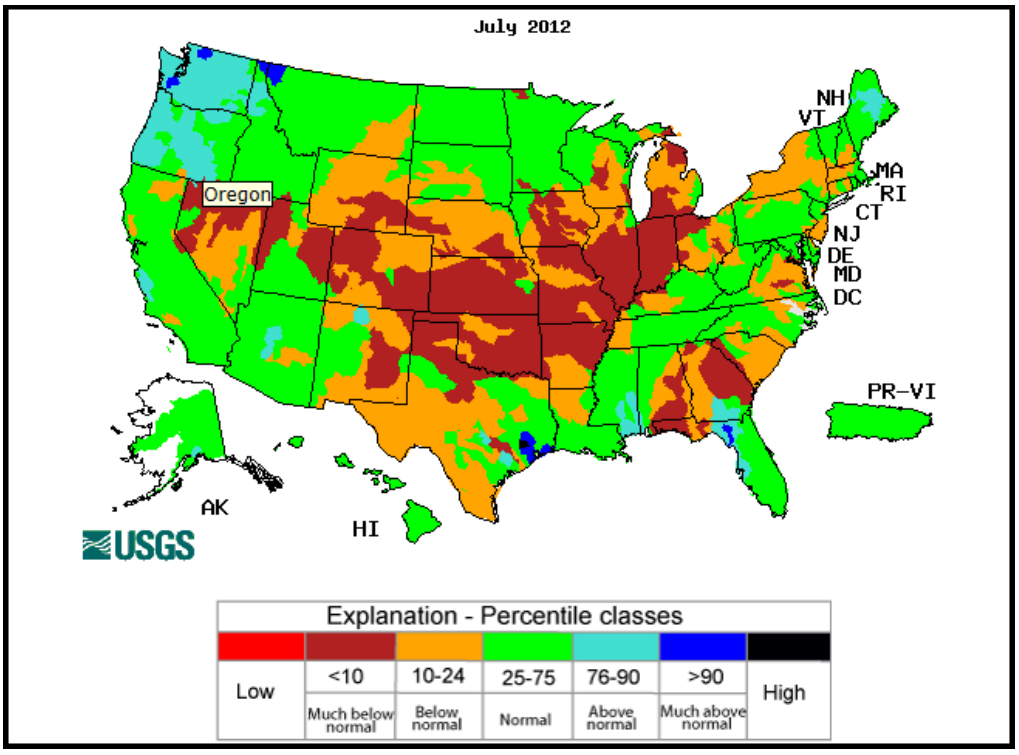
June 26th, 2012



July 31, 2012

Streamflow:

The United States Geological Survey's (USGS) July 2012 river streamflow records were compared with all historical July streamflow records. Streamflow was near normal over all but portions of Pascagoula River System in East and Southeast Mississippi where streamflow was above normal.



July Streamflow

No river flooding was reported during the month. Minor rises occurred across most of the river basins in the HSA.

Warmer than normal temperatures from the Rockies to the Atlantic and 3 month rainfall over the Middle Mississippi and Ohio Valleys from 8 to 12 inches below normal has produced very low stages along the Mississippi River. River stages from Arkansas City to Natchez are becoming low enough to pose problems to navigation along the river reach.

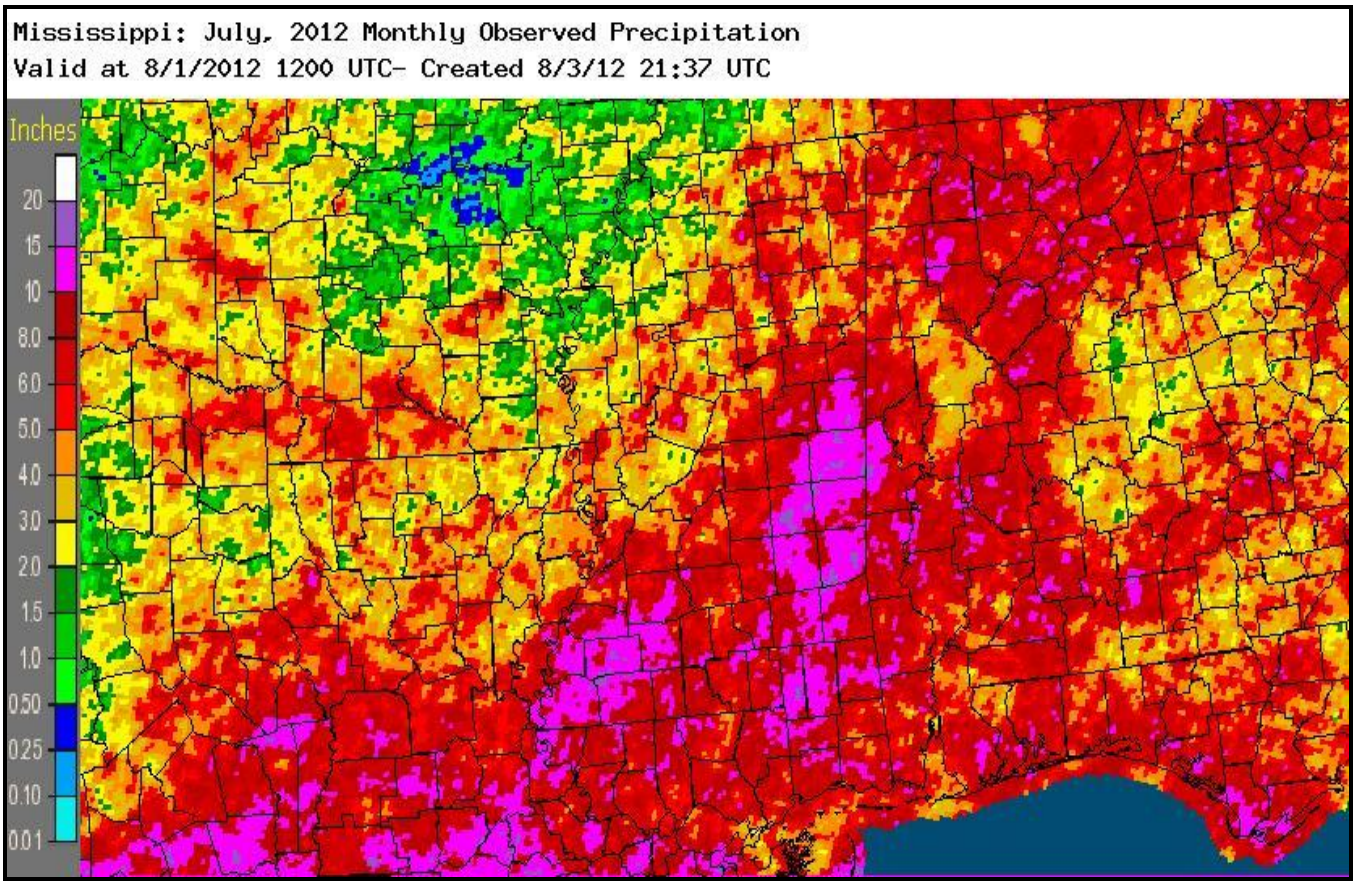
Temperatures are expected to remain above normal in the 1 month period while there are even chances for above, normal, or below normal temperatures in the 3 month period. Rainfall is expected to be above normal in the 1 to 3 month period with the greatest confidence for above normal rainfall across the southern HSA. Based on current soil moisture, streamflow, and the 1 to 3 month weather outlooks, flood potentials are as follows:

***Pearl River System*:**	**Average.**
***Yazoo River System*:**	**Below average.**
***Big Black River System*:**	**Average.**
***Homochitto River System*:**	**Average.**
***Pascagoula River System*:**	**Average.**
***Northeast LA and Southeast AR*:**	**Below average.**
***Tombigbee River System*:**	**Below average.**
Mississippi River:	**Below average.**

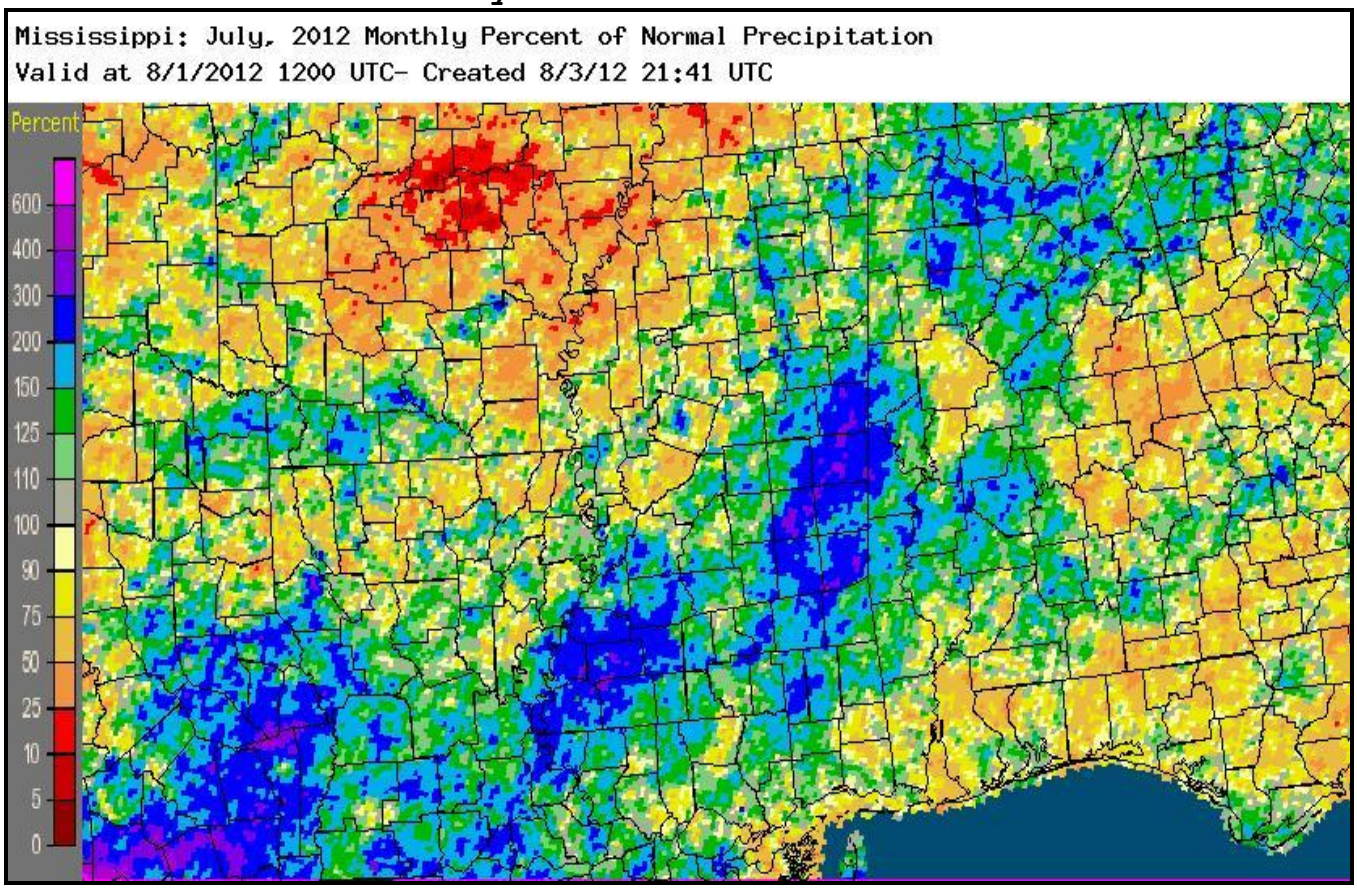
Rainfall for the month of July:

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on June 30th until 7 am on July 31st were: 12.05 inches at Union Church, MS; 11.90 inches at MSU Newton Ag Experimental Station, MS; 11.47 inches Hazlehurst, MS; 11.25 inches at Pat Harrison Waterway's Archusa Water Park, MS and Topton, MS; 10.96 inches at Raleigh, MS; 10.64 inches at Walnut Grove, MS; 10.53 inches at Meadville 5SE, MS; 10.37 inches at Hattiesburg, MS; and 10.12 inches at Bay Springs MS.

Some lesser monthly totals: 3.19 inches near Bastrop, LA; 3.20 inches at Oakridge, LA; 3.28 at Eupora, MS; 3.39 inches at Oak Grove, LA; and 3.71 inches at Pioneer, LA.



July 2012 Rainfall Estimates



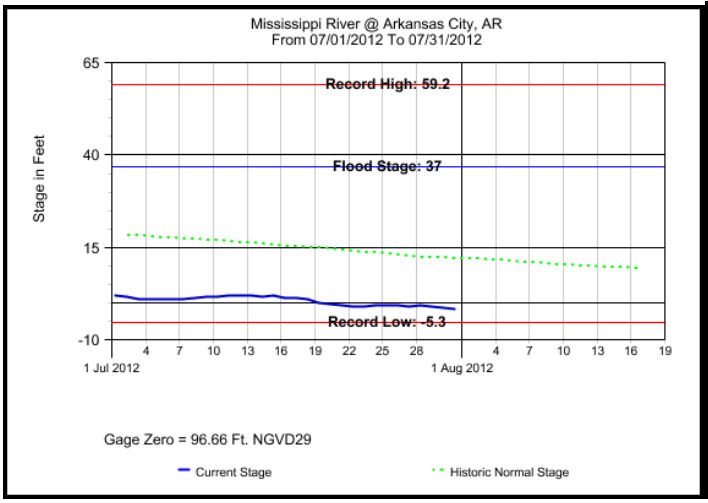
July 2012 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

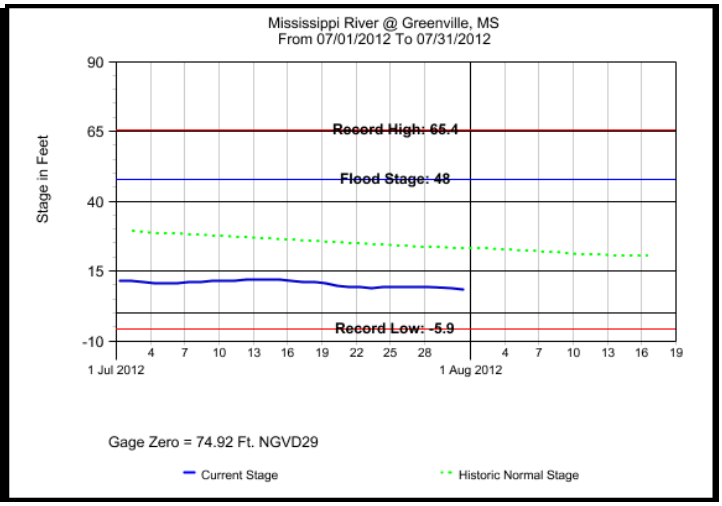
July rainfall for Selected Cities...

City (Airport)	July Rainfall	Departure from normal	2012 Rainfall	2012 Departure from Normal
Jackson, MS	7.80	+2.99	43.76	+10.72
Meridian, MS	6.56	+1.43	37.37	+2.40
Greenwood, MS	4.61	+1.01	23.25	-7.99
Greenville, MS	1.72	-2.08	22.32	-9.78
Hattiesburg, MS	8.20	+2.81	38.68	+1.25
Vicksburg, MS	3.72	+0.09	32.18	-0.74

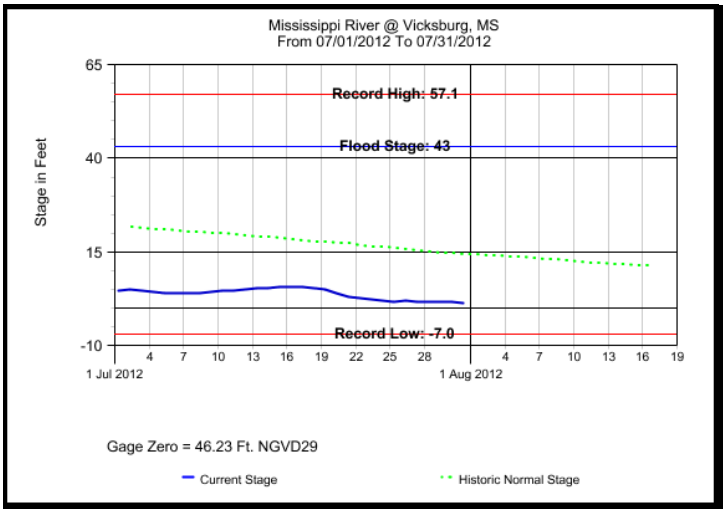
Mississippi River...
Mississippi River Plots for July, 2012
Plots Courtesy of the United States Army Corps of Engineers



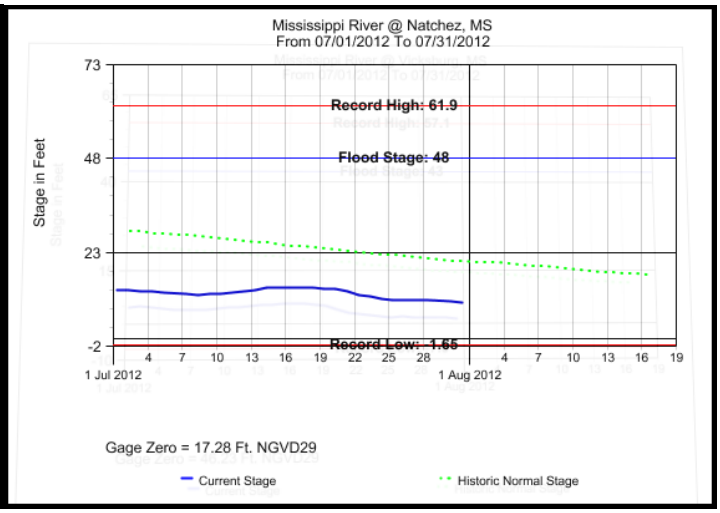
ARKANSAS CITY, AR



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	2.13	07/13/12	1.59	07/31/12
Greenville, MS	48	12.00	07/13/12	8.47	07/31/12
Vicksburg, MS	43	5.81	07/15/12	1.09	07/31/12
Natchez, MS	48	13.89	07/17/12	9.61	07/31/12

Total Flood Warning products issued: 0
Total Flood Statement products issued: 0
Total Flood Advisories MS River : 0
Daily Climate and Ag WX Products (AGO'S) issued: 31
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 31
Daily River and Lake Summary Products (RVD'S) issued: 31

Marty V. Pope

Service Hydrologist &
Latrice Maxie

Assistant Hydrologist/Observing Program Leader (OPL)

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District